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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/661,516	09/15/2003	Shenshen Wu	20020002.0350	7840

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EXAMINER	
HUNTER, ALVIN A	

ART UNIT	PAPER NUMBER
3711	

DATE MAILED: 06/15/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/661,516	WU ET AL.	
	Examiner	Art Unit	
	Alvin A. Hunter	3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4,5,7,9,17,29,30 and 48-60* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1, 2, 4, 5, 7, 9, 17, 29, 30, 48-60* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

The declaration filed on 2/02/2006 under 37 CFR 1.131 is sufficient to overcome the Kennedy et al. reference. See MPEP 715.04.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 4, 5, 7, 9, and 17 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Sullivan et al. (USPN 6548618).

In regards to claim 1, Sullivan et al. discloses a method for forming golf equipment, or a portion thereof in which comprises (a) providing a first reactable component comprising an isocyanate-containing compound and a second reactable component comprising at least one of a polyol, polyamine, or epoxy-containing; (b) combining the reactable components together to form a reactive mixture compound; wherein the reactive mixture has a gelation time and wherein the first and second reactable components naturally has a viscosity of from about 25 to about 5000 cps at ambient temperature or at a temperature at which the reactable components are combined being that Sullivan et al. discloses the polyol and polyisocyanates of the

group disclosed by the applicant, and injecting the reactive mixture into a mold having a desired shape within a first time and wherein the first time is about 60 seconds or less (See Paragraph bridging Columns 4 and 5). Though Sullivan does not explicitly disclose the first time being less than the gelation time, it is believed to be present because the gelation is dependent of the size of the mold and how quickly the mixture can be injected into the mold before gelation (See Column 33, lines 28 through 53). Also, being that Sullivan et al. discloses its use within a golf ball, it would be implied that the mixture would take on the spherical shape of that of the mold when injected mixture fills the mold. One having ordinary skill in the art would have found it obvious to inject the mixture at any rate into the mold in order to obtain the desired shaped before gelation.

In regards to claim 2, Sullivan et al. notes that an isocyanate compound may also in the form of an isocyanate combined with a polyol (See Column 22, lines 55 through 63).

In regards to claim 4, Sullivan et al. discloses the isocyanate compound comprising a toluene diisocyanate (See Column 22).

In regards to claim 5, Sullivan et al. discloses the golf equipment being a golf ball.

In regards to claim 7, Sullivan et al. shows the golf ball comprised of a solid center, optionally at least one intermediate layer disposed about the center, and at least one cover layer disposed about the center and the optional intermediate layer (See All Figures).

In regards to claim 9, Sullivan discloses the cover layer of the golf ball having a first material hardness and the layer disposed immediately inside the cover layer of a second material wherein the outer cover has a hardness of 55 or more Shore D and the layer inside the cover layer has a hardness of 45 or less Shore D (See Column 7 and Column 21).

In regards to claim 17, see the above regarding claim 1.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 30 and 55-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (USPN 6548618).

In regards to claims 30 and 55, Sullivan et al. discloses a method for forming golf equipment, or a portion thereof in which comprises (a) providing a first reactable component comprising an isocyanate-containing compound and a second reactable component comprising at least one of a polyol, polyamine, or epoxy-containing', (b) combining the reactable components together to form a reactive mixture compound; wherein the reactive mixture has a gelation time and wherein the first and second reactable components naturally has a viscosity of from about 25 to about 5000 cps at ambient temperature or at a temperature at which the reactable components are

combined being that Sullivan et al. discloses the polyol and polyisocyanates of the group disclosed by the applicant, and injecting the reactive mixture into a mold having a desired shape within a first time and wherein the first time is about 60 seconds or less (See Paragraph bridging Columns 4 and 5). Though Sullivan does not explicitly disclose the first time being less than the gelation time, it is believed to be present because the gelation is dependent of the size of the mold and how quickly the mixture can be injected into the mold before gelation (See Column 33, lines 28 through 53). Also, being that Sullivan et al. discloses its use within a golf ball, it would be implied that the mixture would take on the spherical shape of that of the mold when injected mixture fills the mold. One having ordinary skill in the art would have found it obvious to inject the mixture at any rate into the mold in order to obtain the desired shaped before gelation. Sullivan et al. does not explicitly disclose the amount of hard segment and soft segment to the total weight of the polymer, but one having ordinary skill in the art would have sought each the hard segment (isocyanate containing component) and the soft segment (polyol) to be of any percentage of the total weight of the polymer and would have been obvious. Applicant does not set forth the importance or criticality of the amounts of each component; thus it is seen that any amounts can be used to carry out the above method.

In regards to claims 56 and 57, see the above regarding claim 30.

Claim 54 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kennedy et al. (USPN 6548618) in view of Bock et al. (USPN 4288586).

In regards to claim 54, Sullivan et al. does not disclose the first reactable component comprising greater than about 14% by weight isocyanate groups. Bock et al. discloses a first reactable component, in particular a polyisocyanate, having greater than 14% by weight isocyanate groups (See Column 6, lines 5 through 14). One having ordinary skill in tie ad would have found it obvious to have greater than 14% by weight of isocyanate groups, as taught by Bock et al., in order to more easily process polyurethane.

Claims 29, 48-53, and 58-60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sullivan et al. (USPN 6548618) in view of Peter (USPN 6174984).

In regards to claims 29 and 58, Sullivan et al. discloses a method for forming golf equipment, or a portion thereof in which comprises (a) providing a first reactable component comprising an isocyanate-containing compound and a second reactable component comprising at least one of a polyol, polyamine, or epoxy-containing', (b) combining the reactable components together to form a reactive mixture compound; wherein the reactive mixture has a gelation time and wherein the first and second reactable components naturally has a viscosity of from about 25 to about 5000 cps at ambient temperature or at a temperature at which the reactable components are combined being that Sullivan et al. discloses the polyol and polyisocyanates of the group disclosed by the applicant, and injecting the reactive mixture into a mold having a desired shape within a first time and wherein the first time is about 60 seconds or less (See Paragraph bridging Columns 4 and 5). Though Sullivan does not explicitly disclose the first time being less than the gelation time, it is believed to be present because the

gelation is dependent of the size of the mold and how quickly the mixture can be injected into the mold before gelation (See Column 33, lines 28 through 53). Also, being that Sullvan et al. discloses its use within a golf ball, it would be implied that the mixture would take on the spherical shape of that of the mold when injected mixture fills the mold. One having ordinary skill in the art would have found it obvious to inject the mixture at any rate into the mold in order to obtain the desired shaped before gelation. Sullivan et al. does not disclose a low free isocyanate monomer. Peter discloses a polyurethane composition being reactable with a low free isocyanate monomer (See Column 4, lines 4 through 25). One having ordinary skill in the art would have found it obvious to incorporate a low free isocyanate monomer into the polyurethane composition of Sullivan et al., as taught by Peter, for economical purposes.

In regards to claim 48, Sullivan et al. inherently discloses the second reactable component having a molecular weight of about 400 g/mol or greater being that the second reactable component is the same as that claimed by the applicant.

In regards to claim 49, Sullivan et al. discloses the solidification time of the reactive mixture being less than 30 seconds.

In regards to claim 50, Applicant does not disclose why it is critical for the first and second reactable components each to have a viscosity of about 1000 cps or less in order to attain the invention; therefore, one having ordinary skill in the art would concluded that Sullivan et al. naturally teaches the first and second reactable components meeting the viscosity requirements of claim 50 because of the selection of materials.

In regards to claim 51, Sullivan et al. discloses the step of injecting comprising of injecting the reactive mixture into the mold at a pressure of about 50 to 200 psi (See Column 34, lines 43 through 53).

In regards to claim 52, Sullivan et al. discloses the step of injecting being liquid injection molding.

In regards to claim 53, Peter discloses a first reactable component comprising less than about 0.1% free isocyanate containing monomer groups (See Column 5, lines 42 through 44).

In regards to claim 59, Sullivan et al. discloses the isocyanate compound comprising a toluene diisocyanate (See Column 22).

In regards to claim 60, Sullivan et al. notes that the incorporation of meta-tetramethylxylylene (TMXDI) is optional. (See Column 26, lines 40 through 57). One having ordinary skill in the art would have drawn from Sullivan et al. that the invention would still attain the same purpose absent TMXDI.

Response to Arguments

Applicant's arguments filed 2/02/06 have been fully considered but they are not persuasive. Applicant argues that Sullivan is not prior art based on submittal of declaration under 1.131. The examiner disagrees. Although a declaration under 37 1.131 would disqualify Sullivan from being prior art, the declaration was not properly executed. MPEP 715.04 specifically set out guidelines for executing the declaration. The declaration submitted fails to include the signatures of all of the inventors. Furthermore, the showing of reduction to practice is in question for a number of

reasons. First, the showing is not consistent with what is being claimed, particularly the 60 seconds or less. The declaration only shows 35 second or less for injection time before gelation. And second, it appears to be evidence missing from the showing due to the pages not sequentially making sense. Also, according to MPEP 715.07, actual evidence of lab results must be supported by original documentation such as a page from a lab notebook. Because of the above, it is believe that the Declaration under 1.131 is not sufficient and thus the above rejection has been furnished.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alvin A. Hunter whose telephone number is (571) 272-4411. The examiner can normally be reached on Monday through Friday from 7:30AM to 4:00PM Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Kim, can be reached on 571-272-4463. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AAH

Alvin A. Hunter, Jr.

EUGENE KIM
SUPERVISORY PATENT EXAMINER